

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-013468**Date Inspected:** 27-Apr-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Bernard Docena, Steve McConnell			CWI Present:	Yes	No	
Inspected CWI report:	Yes	No	N/A	Rod Oven in Use:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A	Weld Procedures Followed:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A	Verified Joint Fit-up:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A	Approved WPS:	Yes	No	N/A
				Delayed / Cancelled:	Yes	No	N/A
Bridge No:	34-0006			Component:	SAS OBG 3W/4W-A, 1W/2W-E,		

Summary of Items Observed:

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the weld joints identified as 1W/2W-E & D, 3W/4W-A and the following observations were made:

3W/4W-A**A3-A5**

The QA Inspector randomly observed the ABF welding operator Jordan Hazelaar continue welding the SAW fill/cover passes in the center of A3 and weld to the end of section A5. The QA Inspector randomly observed the SAW parameters and they were 560 Amps, 32.6 Volts and a travel speed of 385mm/min. The QA Inspector noted the SAW parameters appeared to be in general compliance with ABF-WPS-D1.5-4042B-1. The QA Inspector randomly observed the ABF welding operator complete the above identified weld segments on the QA Inspectors shift. The QA Inspector noted no additional grinding or welding was performed on the QA Inspectors shift.

A3-A1

The QA Inspector randomly observed the ABF welding operator Jordan Hazelaar continue welding the SAW fill passes in the center of A3 and weld to the end of section A1 after he had completed the A3-A5 weld segments.. The QA Inspector randomly observed the SAW parameters and they were 565 Amps, 33.4 Volts and a travel speed of 390mm/min. The QA Inspector noted the SAW parameters appeared to be in general compliance with ABF-WPS-D1.5-4042B-1. The QA Inspector randomly observed the ABF welder discovered several areas of porosity on the SAW fill pass previously deposited. The QA Inspector randomly observed the ABF welder and helper begin performing grinding tasks in an attempt to remove all of the porosity prior to the next SAW fill pass.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

The QA Inspector randomly observed after the grinding was completed, the areas were ground to a weldable profile and Mr. Hazelaar began performing SMAW of the excavated areas prior to resuming the SAW production welding. After the SMAW repairs were completed on the in process groove weld, the QA Inspector randomly observed the ABF welding operator continued performing the SAW fill passes for the remainder of the QA Inspectors shift.

1W/2W-E2

The QA Inspector randomly observed the ABF welders had previously started the induction heating blankets to ensure the minimum required preheat of 150°F was achieved prior to welding. The QA Inspector randomly verified utilizing a 150°F temperature indicating marker and noted the minimum required preheat had been achieved. The QA Inspector observed the ABF Song Tao Huang began performing SAMW root/fill passes at the top of weld segment E2. The QA Inspector noted the ABF welder was tying in the edge plate identified as "F" to the edge of the complete joint penetration groove weld "E". The QA Inspector noted the ABF welder was utilizing 1/8" E7018 low Hydrogen electrodes with 115 Amps. The QA Inspector noted the root/fill/cover passes were completed over an area approximately 250mm from the end of the weld segment E2. The QA Inspector noted no additional welding was performed on this date at the above identified location.

1W/2W-D/S (stiffeners)

The QA Inspector randomly observed the ABF welders James Zhen and Song Tao Huang setting up to begin performing the SMAW weld joint restoration or "butter" passes at the above identified location. The QA Inspector noted no welding was performed on the QA Inspectors shift only some grinding tasks and preheating in preparation of performing the SMAW vertical weld joint restoration.



Summary of Conversations:

The QA Inspector and the ABF Welding Quality Control Manager (WQCM) Jim Bowers went to the bottom side of the top deck plate at 2W/3W-A to observe gaps at the steel backing bar. Mr. Bowers informed the QA Inspector the reports generated by the SE QC indicated the gap between the steel backing and the bevel at the transition was 6mm not the 9mm indicted by the QA Inspector. The QA Inspector informed Mr. Bowers a picture with the millimeter scale indicating the 9mm was on record, and in addition the SE QC Isnpecotr Bnifacio Daquinag concurred with the QA Inspector at the time of the inspection. Mr. Bowers did not dispute the size of the gap rather informed the QA Inspector at this point it does not matter if the gap was 6mm or 9mm, an internal non conformance report would be generated by ABF for welding over the gap without sufficient engineering approval.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916)-813-3677, who represents the Office of Structural Materials for your project.

Inspected By:	Bettencourt,Rick
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Quality Assurance Inspector

Reviewed By:	Levell,Bill
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QA Reviewer
